

Serial Number: 09/858,681

ENTERED

☐

Changed a file from non-ASCII to ASCII

☐

Changed the margins in cases where the sequence text was wrapped down to the next line.

☐

Edited a format error in the Current Application Data section, specifically:

☐Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____☐

Added the mandatory heading and subheadings for "Current Application Data".

☐

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

☐

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

☐

Corrected the SEO ID NO when obviously incorrect. The sequence numbers that were edited were:

☐

Inserted or corrected a nucleic number at the end of a nucleic line. SEO ID NO's edited:

☐

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

☐

Inserted colons after headings/subheadings. Headings edited included:

☐

Deleted extra, invalid, headings used by an applicant, specifically:

☐Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/lastname at end of file;
☐ page numbers throughout text; ☐ other invalid text, such as _____☐

Inserted mandatory headings, specifically: _____

☐

Corrected an obvious error in the response, specifically:

☐

Edited identifiers where upper case is used but lower case is required, or vice versa.

☐

Corrected an error in the Number of Sequences field, specifically:

☐

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

☐

Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a Patent bug). Sequences corrected: _____

☒

Other: Seq 2 - corrected amino acid nos.

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/856,681

DATE: 10/16/2001

TIME: 18:00:22

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\10162001\I856681.raw

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3 <110> APPLICANT: Behl, Christian
4   Klostermann, Andreas
6 <120> TITLE OF INVENTION: Human semaphorin 6A-1 (SEMA6A-A), a gene involved
7   in neuronal development and regeneration mechanisms
8   during apoptosis, and its use as a potential drug target
10 <130> FILE REFERENCE: 48498-258443
12 <140> CURRENT APPLICATION NUMBER: 09/856,681
13 <141> CURRENT FILING DATE: 2001-05-22
15 <150> PRIOR APPLICATION NUMBER: PCT/EP99/09215
16 <151> PRIOR FILING DATE: 1999-11-26
18 <150> PRIOR APPLICATION NUMBER: 98122441.3
19 <151> PRIOR FILING DATE: 1998-11-26
21 <160> NUMBER OF SEQ ID NOS: 7
23 <170> SOFTWARE: PatentIn Ver. 2.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 3093
27 <212> TYPE: DNA
28 <213> ORGANISM: Homo sapiens
30 <220> FEATURE:
31 <221> NAME/KEY: CDS
32 <222> LOCATION: (1)..(3093)
34 <400> SEQUENCE: 1
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37   1           5           10           15
39 ggg gct ggt ttc cca gaa gat tct gag cca atc agt att tcg cat ggc 96
40 Gly Ala Gly Phe Pro Glu Asp Ser Glu Pro Ile Ser Ile Ser His Gly
41   20           25           30
43 aac tat aca aaa cag tat ccg gtg ttt gtg ggc cac aag cca gga cgg 144
44 Asn Tyr Thr Lys Gln Tyr Pro Val Phe Val Gly His Lys Pro Gly Arg
45   35           40           45
47 aac acc aca cag agg cac agg ctg gac atc cag atg att atg atc atg 192
48 Asn Thr Thr Gln Arg His Arg Leu Asp Ile Gln Met Ile Met Ile Met
49   50           55           60
51 aac gga acc ctc tac att gct gct agg gac cat att tat act gtt gat 240
52 Asn Gly Thr Leu Tyr Ile Ala Ala Arg Asp His Ile Tyr Thr Val Asp
53   65           70           75           80
55 ata gac aca tca cac acg gaa gaa att tat tgt agc aaa aaa ctg aca 288
56 Ile Asp Thr Ser His Thr Glu Glu Ile Tyr Cys Ser Lys Lys Leu Thr
57   85           90           95
60 tgg aaa tct aga cag gcc gat gta gac aca tgc aga atg aag gga aaa 336
61 Trp Lys Ser Arg Gln Ala Asp Val Asp Thr Cys Arg Met Lys Gly Lys
62   100          105          110
64 cat aag gat gag tgc cac aac ttt att aaa gtt ctt cta aag aaa aac 384
65 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
66   115          120          125
68 gat gat gca ttg ttt gtc tgt gga act aat gcc ttc aac cct tcc tgc 432

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69 Asp Asp Ala Leu Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Ser Cys
70      130      135      140
72 aga aac tat aag atg gat aca ttg gaa cca ttc ggg gat gaa ttc agc 480
73 Arg Asn Tyr Lys Met Asp Thr Leu Glu Pro Phe Gly Asp Glu Phe Ser
74 145      150      155      160
76 gga atg gcc aga tgc cca tat gat gcc aaa cat gcc aac gtt gca ctg 528
77 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu
78      165      170      175
80 ttt gca gat gga aaa cta tac tca gcc aca gtg act gac ttc ctt gcc 576
81 Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Thr Asp Phe Leu Ala
82      180      185      190
84 att gac gca gtc att tac cgg agt ctt gga gaa agc cct acc ctg cgg 624
85 Ile Asp Ala Val Ile Tyr Arg Ser Leu Gly Glu Ser Pro Thr Leu Arg
86      195      200      205
88 acc gtc aag cac gat tca aaa tgg ttg aaa gaa cca tac ttt gtt caa 672
89 Thr Val Lys His Asp Ser Lys Trp Leu Lys Glu Pro Tyr Phe Val Gln
90      210      215      220
92 gcc gtg gat tac gga gat tat atc tac ttc ttc agg gaa ata gca 720
93 Ala Val Asp Tyr Gly Asp Tyr Ile Tyr Phe Phe Phe Arg Glu Ile Ala
94 225      230      235      240
96 gtg gag tat aac acc atg gga aag gta gtt ttc cca aga gtg gct cag 768
97 Val Glu Tyr Asn Thr Met Gly Lys Val Val Phe Pro Arg Val Ala Gln
98      245      250      255
100 gtt tgt aag aat gat atg gga gga tct caa aga gtc ctg gag aaa cag 816
101 Val Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys Gln
102      260      265      270
104 tgg acg tcg ttc ctg aag gcg cgc ttg aac tgc tca gtt cct gga gac 864
105 Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly Asp
106      275      280      285
108 tct cat ttt tat ttc aac att ctc cag gca gtt aca gat gtg att cgt 912
109 Ser His Phe Tyr Phe Asn Ile Leu Gln Ala Val Thr Asp Val Ile Arg
110      290      295      300
112 atc aac ggg cgt gat gtt gtc ctg gca acg ttt tct aca cct tat aac 960
113 Ile Asn Gly Arg Asp Val Val Leu Ala Thr Phe Ser Thr Pro Tyr Asn
114 305      310      315      320
116 agc atc cct ggg tct gca gtc tgt gcc tat gac atg ctt gac att gcc 1008
117 Ser Ile Pro Gly Ser Ala Val Cys Ala Tyr Asp Met Leu Asp Ile Ala
118      325      330      335
120 agt gtt ttt act ggg aga ttc aag gaa cag aag tct cct gat tcc acc 1056
121 Ser Val Phe Thr Gly Arg Phe Lys Glu Gln Lys Ser Pro Asp Ser Thr
122      340      345      350
124 tgg aca cca gtt cct gat gaa cga gtt cct aag ccc agg cca ggt tgc 1104
125 Trp Thr Pro Val Pro Asp Glu Arg Val Pro Lys Pro Arg Pro Gly Cys
126      355      360      365
128 tgt gct ggc tca tcc tcc tta gaa aga tat gca acc tcc aat gag ttc 1152
129 Cys Ala Gly Ser Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe
130      370      375      380
132 cct gat gat acc ctg aac ttc atc aag acg cac ccg ctc atg gat gag 1200
133 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu

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201	ctg	gct	ttc	gtc	atg	ggg	gcc	gtc	ttc	tcg	ggc	atc	acc	gtc	tac	tgc	2016
202	Leu	Ala	Phe	Val	Met	Gly	Ala	Val	Phe	Ser	Gly	Ile	Thr	Val	Tyr	Cys	
203				660					665					670			
205	gtc	tgt	gat	cat	cgg	cgc	aaa	gac	gtg	gct	gtg	gtg	cag	cgc	aag	gag	2064
206	Val	Cys	Asp	His	Arg	Arg	Lys	Asp	Val	Ala	Val	Val	Gln	Arg	Lys	Glu	
207				675				680					685				
209	aag	gag	ctc	acc	cac	tcg	cgc	cgg	ggc	tcc	atg	agc	agc	gtc	acc	aag	2112
210	Lys	Glu	Leu	Thr	His	Ser	Arg	Arg	Gly	Ser	Met	Ser	Ser	Val	Thr	Lys	
211		690					695					700					
213	ctc	agc	ggc	ctc	ttt	ggg	gac	act	caa	tcc	aaa	gac	cca	aag	ccg	gag	2160
214	Leu	Ser	Gly	Leu	Phe	Gly	Asp	Thr	Gln	Ser	Lys	Asp	Pro	Lys	Pro	Glu	
215	705					710					715					720	
217	gcc	atc	ctc	acg	cca	ctc	atg	cac	aac	ggc	aag	ctc	gcc	act	ccc	ggc	2208
218	Ala	Ile	Leu	Thr	Pro	Leu	Met	His	Asn	Gly	Lys	Leu	Ala	Thr	Pro	Gly	
219				725					730					735			
221	aac	acg	gcc	aag	atg	ctc	att	aaa	gca	gac	cag	cac	cac	ctg	gac	ctg	2256
222	Asn	Thr	Ala	Lys	Met	Leu	Ile	Lys	Ala	Asp	Gln	His	His	Leu	Asp	Leu	
223				740					745					750			
225	acg	gcc	ctc	ccc	acc	cca	gag	tca	acc	cca	acg	ctg	cag	cag	aag	cgg	2304
226	Thr	Ala	Leu	Pro	Thr	Pro	Glu	Ser	Thr	Pro	Thr	Leu	Gln	Gln	Lys	Arg	
227				755				760					765				
229	aag	ccc	agc	cgc	ggc	agc	cgc	gag	tgg	gag	agg	aac	cag	aac	ctc	atc	2352
230	Lys	Pro	Ser	Arg	Gly	Ser	Arg	Glu	Trp	Glu	Arg	Asn	Gln	Asn	Leu	Ile	
231		770					775					780					
233	aat	gcc	tgc	aca	aag	gac	atg	ccc	ccc	atg	ggc	tcc	cct	gtg	att	ccc	2400
234	Asn	Ala	Cys	Thr	Lys	Asp	Met	Pro	Pro	Met	Gly	Ser	Pro	Val	Ile	Pro	
235	785					790					795					800	
237	acg	gac	ctg	ccc	ctg	cgg	gcc	tcc	ccc	agc	cac	atc	ccc	agc	gtg	gtg	2448
238	Thr	Asp	Leu	Pro	Leu	Arg	Ala	Ser	Pro	Ser	His	Ile	Pro	Ser	Val	Val	
239				805					810					815			
241	gtc	ctg	ccc	atc	acg	cag	cag	ggc	tac	cag	cat	gag	tac	gtg	gac	cag	2496
242	Val	Leu	Pro	Ile	Thr	Gln	Gln	Gly	Tyr	Gln	His	Glu	Tyr	Val	Asp	Gln	
243				820				825						830			
245	ccc	aaa	atg	agc	gag	gtg	gcc	cag	atg	gcg	ctg	gag	gac	cag	gcc	gcc	2544
246	Pro	Lys	Met	Ser	Glu	Val	Ala	Gln	Met	Ala	Leu	Glu	Asp	Gln	Ala	Ala	
247			835					840					845				
249	aca	ctg	gag	tat	aag	acc	atc	aag	gaa	cat	ctc	agc	agc	aag	agt	ccc	2592
250	Thr	Leu	Glu	Tyr	Lys	Thr	Ile	Lys	Glu	His	Leu	Ser	Ser	Lys	Ser	Pro	
251		850					855					860					
253	aac	cat	ggg	gtg	aac	ctt	gtg	gag	aac	ctg	gac	agc	ctg	ccc	ccc	aaa	2640
254	Asn	His	Gly	Val	Asn	Leu	Val	Glu	Asn	Leu	Asp	Ser	Leu	Pro	Pro	Lys	
255	865					870					875					880	
257	gtt	cca	cag	cgg	gag	gcc	tcc	ctg	ggt	ccc	ccg	gga	gcc	tcc	ctg	tct	2688
258	Val	Pro	Gln	Arg	Glu	Ala	Ser	Leu	Gly	Pro	Pro	Gly	Ala	Ser	Leu	Ser	
259				885					890					895			
261	cag	acc	ggt	cta	agc	aag	cgg	ctg	gaa	atg	cac	cac	tcc	tct	tcc	tac	2736
262	Gln	Thr	Gly	Leu	Ser	Lys	Arg	Leu	Glu	Met	His	His	Ser	Ser	Ser	Tyr	
263				900					905					910			
265	ggg	gtt	gac	tat	aag	agg	agc	tac	ccc	acg	aac	tcg	ctc	acg	aga	agc	2784

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266 Gly Val Asp Tyr Lys Arg Ser Tyr Pro Thr Asn Ser Leu Thr Arg Ser
267          915          920          925
269 cac cag gcc acc act ctc aaa aga aac aac act aac tcc tcc aat tcc 2832
270 His Gln Ala Thr Thr Leu Lys Arg Asn Asn Thr Asn Ser Ser Asn Ser
271      930          935          940
273 tct cac ctc tcc aga aac cag agc ttt ggc agg gga gac aac ccg ccg 2880
274 Ser His Leu Ser Arg Asn Gln Ser Phe Gly Arg Gly Asp Asn Pro Pro
275 945          950          955          960
277 ccc gcc ccg cag agg gtg gac tcc atc cag gtg cac agc tcc cag cca 2928
278 Pro Ala Pro Gln Arg Val Asp Ser Ile Gln Val His Ser Ser Gln Pro
279          965          970          975
281 tct ggc cag gcc gtg act gtc tcg agg cag ccc agc ctc aac gcc tac 2976
282 Ser Gly Gln Ala Val Thr Val Ser Arg Gln Pro Ser Leu Asn Ala Tyr
283          980          985          990
285 aac tca ctg aca agg tcg ggg ctg aag cgt acg ccc tcg cta aag ccg 3024
286 Asn Ser Leu Thr Arg Ser Gly Leu Lys Arg Thr Pro Ser Leu Lys Pro
287      995          1000          1005
289 gac gta ccc ccc aaa cca tcc ttt gct ccc ctt tcc aca tcc atg aag 3072
290 Asp Val Pro Pro Lys Pro Ser Phe Ala Pro Leu Ser Thr Ser Met Lys
291 1010          1015          1020
294 ccc aat gat gcg tgt aca taa 3093
295 Pro Asn Asp Ala Cys Thr
296 1025          1030
299 <210> SEQ ID NO: 2
300 <211> LENGTH: 1030
301 <212> TYPE: PRT
302 <213> ORGANISM: Homo sapiens
304 <400> SEQUENCE: 2
305 Met Arg Ser Glu Ala Leu Leu Leu Tyr Phe Thr Leu Leu His Phe Ala
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308 Gly Ala Gly Phe Pro Glu Asp Ser Glu Pro Ile Ser Ile Ser His Gly
309          20          25          30
311 Asn Tyr Thr Lys Gln Tyr Pro Val Phe Val Gly His Lys Pro Gly Arg
312          35          40          45
314 Asn Thr Thr Gln Arg His Arg Leu Asp Ile Gln Met Ile Met Ile Met
315          50          55          60
317 Asn Gly Thr Leu Tyr Ile Ala Ala Arg Asp His Ile Tyr Thr Val Asp
318 65          70          75          80
320 Ile Asp Thr Ser His Thr Glu Glu Ile Tyr Cys Ser Lys Lys Leu Thr
321          85          90          95
323 Trp Lys Ser Arg Gln Ala Asp Val Asp Thr Cys Arg Met Lys Gly Lys
324          100          105          110
326 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
327          115          120          125
329 Asp Asp Ala Leu Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Ser Cys
330          130          135          140
332 Arg Asn Tyr Lys Met Asp Thr Leu Glu Pro Phe Gly Asp Glu Phe Ser
333 145          150          155          160
335 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu

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VERIFICATION SUMMARY

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